1: Biochimie. 1989 Jul;71(7):857-63. Related Articles, Links

Integration and germ line transmission of foreign genes microinjected into fertilized trout eggs.

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Persistence, integration into host genome, germ line transmission and expression of foreign genes microinjected into cytoplasm of fertilized rainbow trout eggs has been examined. Foreign DNA persisted as large random concatenates in approximately 50% of 6 to 12 month-old trout and exhibited a mosaic pattern between tissues. In some cases, free concatenates were observed indicating that extrachromosomal replication occurred in trout. Approximately 50% of the males had the foreign sequences in sperm DNA and all the examined animals transmitted these sequences to their progeny. The percentage of transgenic offsprings ranged from 10 to 30% and putative junction fragments were identified in Southern blot analysis in some of them. These results strongly support the hypothesis that the injected genes became integrated into the genome host, most likely after the first round of chromosomal replication. We also examined the expression of the microinjected plasmids which contained viral or mammalian promoters linked to human or rat growth hormone gene. In no case could exogenous growth hormone be detected.

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